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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,391	04/11/2001	Curtis Lee Carrender.	12813-B	3770
36977	7590	12/14/2004	EXAMINER	
SEED INTELLECTUAL PROPERTY LAW GROUP PLLC			NGUYEN, PHUNG	
701 FIFTH AVENUE, SUITE 6300			ART UNIT	
SEATTLE, WA 98104-7092			PAPER NUMBER	
			2632	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/833,391	CARRENDER, CURTIS LEE	
	Examiner	Art Unit	
	Phung T Nguyen	2632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-8 and 10-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-8, and 10-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-8, and 10-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nysen (U.S. Pat. 6,107,910) in view of Mays et al. (U.S. Pat. 5,828,693).

Regarding claim 1: Nysen discloses dual mode transmitter/receiver and decoder for RF transponder tags which comprises all subject matter as follows:

- a. a frequency-hopping source configured to sequentially generate radio-frequency signals at pseudo-randomly selected frequencies (col. 31, lines 60-67, and col. 37, lines 35-38);
- b. a transmitter 10 coupled to the frequency-hopping source and to an antenna circuit (figure 49, col. 38, lines 1-34);
- c. a heterodyne receiver coupled to the antenna circuit and configured to receive on the antenna circuit reflected radio-frequency signals from the RFID tag (col. 37, lines 42-46);
- d. a signal processor 632 (figure 49, col. 38, lines 26-45) wherein the signal processor is configured to receive the reflected radio-frequency signals and to extract data contained within the reflected radio-frequency signals;
- e. Nysen teaches only one antenna as shown in figure 49. However, Nysen also teaches in one embodiment of using two antennas 16, and 26 as shown in figure 1, col. 12, lines 45-54, and col. 13, lines 13-19). Therefore, it would be obvious to the skilled artisan to use it in order to

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transmit the radio-frequency signals on the first antenna and to receive the reflected radio-frequency signals on the second antenna so that the communication speed is increased. Nysen also teaches the claimed a divider circuit met by phase generator 605 (figure 29, col. 38, lines 26-29).

Nysen does not teach generating radio-frequency signals at pseudo-randomly selected frequencies within a frequency-band of 902 to 928 MHz or 2.45 GHz to 5.8 GHz as claimed. However, it would be an obvious design choice to select any frequency within the allowed frequency bands as needed. Furthermore, Mays et al. disclose spread spectrum frequency hopping reader system including a frequency source 100 capable of hopping between 902 and 928 MHz (col. 10, lines 8-19). Therefore, it would be obvious to the skilled artisan to employ the teaching of Mays et al. in the system of Nysen in order to comply with FCC Part 15.

Regarding claim 2: Nysen teaches the heterodyne receiver (col. 37, lines 42-46).

Regarding claim 4: Nysen teaches the low-noise amplifier 608 is configured to amplify the received reflected radio-frequency signals (col. 35, lines 59-67).

Regarding claim 5: Nysen teaches the frequency-hopping source is configured to sequentially generate radio-frequency signals at regular time intervals (col. 36, lines 30-40).

Regarding claim 6: Nysen teaches the transmitter is configured to modulate the pseudo-randomly selected radio-frequency signals (col. 31, lines 54-62).

Regarding claim 7: All the claimed subject matter is already discussed in respect to claim 1 above. Nysen teaches the RFID interrogator (col. 36, lines 30-40).

Regarding claim 8: Refer to claim 2 above.

Regarding claim 10: Refer to claim 4 above.

Regarding claim 11: Refer to claim 5 above.

Regarding claim 12: Refer to claim 1 above. Nysen also teaches storing data in the RFID tag (col. 9, lines 49-54).

Regarding claim 13: Refer to claim 1 above. Nysen also teaches modulating the reflected radio-frequency signal based on the data extracted at the RFID tag device (col. 9, lines 49-67).

Regarding claim 14: All the claimed subject matter is already discussed in respect to claim 1 above.

Regarding claim 15: The claimed limitation is already discussed in claim 1 above.

Regarding claim 16: Refer to claim 4 above.

Regarding claim 17: Nysen teaches modulating the pseudo-randomly selected radio-frequency signals prior to transmission (col. 31, lines 54-67).

Regarding claim 18: Nysen discloses an RFID interrogator configured to generate and transmit pseudo-randomly selected radio-frequency signals over time and to receive, using a heterodyne reception technique, modulated radio-frequency signals reflected from the RFID (col. 31, lines 54-65, and col. 37, lines 36-49). Nysen teaches a backscatter signal (col. 4, lines 66-67, and col. 5, lines 1-5). Nysen does not specifically show continuous-wave backscatter as claimed. However, it would be obvious to the skilled artisan to recognize that the phase modulated backscatter signal of Nysen is the continuous-wave backscatter.

Nysen does not teach generating radio-frequency signals at pseudo-randomly selected frequencies within a frequency-band of 902 to 928 MHz or 2.45 GHz to 5.8 GHz as claimed. However, it would be an obvious design choice to select any frequency within the allowed

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frequency bands as needed. Furthermore, Mays et al. disclose spread spectrum frequency hopping reader system including a frequency source 100 capable of hopping between 902 and 928 MHz (col. 10, lines 8-19). Therefore, it would be obvious to the skilled artisan to employ the teaching of Mays et al. in the system of Nysen in order to comply with FCC Part 15.

Regarding claim 19: Nysen teaches the frequency-hopping source configured to generate the pseudo-randomly selected radio-frequency signals (col. 37, lines 36-39).

Regarding claim 20: Nysen teaches the passive RFID tag device (col. 4, lines 66-67).

Regarding claim 21: Refer to claim 1 above.

Regarding claim 22: Nysen teaches modulating the pseudo-randomly selected transmitted radio-frequency signals and the RFID device is configured to extract data from the transmitted signals (col. 32, lines 11-24).

Regarding claim 23: Nysen teaches storing data in the RFID tag (col. 9, lines 49-54).

Regarding claim 24: Nysen teaches modulating the reflected radio-frequency signal based on the data extracted at the RFID tag device (col. 9, lines 49-67).

Conclusion

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phung T Nguyen whose telephone number is 571-272-2968. The examiner can normally be reached on 8:00am-5:30pm Mon thru. Friday, with alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on 571-272-2964. The fax numbers for the organization

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where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

Phung Nguyen

A handwritten signature in black ink, appearing to read 'Phung Nguyen', with a stylized flourish at the end.

Date: December 10, 2004